A NEEDS ANALYSIS FOR INSERVICE TRAINING OF ADMINISTRATORS IN PLANNING AND EVALUATION OF VOCATIONAL-TECHNICAL PROGRAMS IN JAMAICAN TECHNICAL HIGH SCHOOLS

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INTRODUCTION

Jamaica like other developing countries has been faced with a variety of economic problems. Among these are limited job opportunities, limited access to education at secondary and tertiary levels and high unemployment. In recent years there has been much emphasis on increasing the offering of vocational and technical education. Consequently, the number of technical high schools has increased, almost doubling in just under eight years--moving from a total of six to eleven (seven officially named technical high schools and four secondary schools that are being upgraded to technical high schools). Additionally, most traditional high schools have added vocational-technical courses to their curricula.

The goal of the technical high school with its specialized emphasis on vocational and technical education is to equip students with skills that will enable them to gain employment and to use the skills possessed to contribute to national development. But although there has been increased funding of vocational-technical education and dramatic increases in the number of students enrolled in vo-tech programs, there is a high rate of unemployment of students being provided vocational and technical education and national development has been very slow.

There has been much speculation as to the cause of high

unemployment among graduates of vo-tech programs and the slow economic growth in the country. A number of criticisms have been leveled at the education system. Criticisms have been aimed at the teachers concerning their lack of dedication, skills and knowledge; at the home for failing to inculcate desirable attitudes in children and at the students for lack of interest in education. Those criticisms have various implications. Among them are the lack of relevance in programs being offered and the need for teachers to update and upgrade their skills. Those two implications are indirectly the target of this study.

The literature revealed that effective planning and evaluation of vocational-technical programs will result in curricula that are relevant to the needs of the persons they serve. Finch & Crunkilton (13) stated that planning is an absolute essential in vocational-technical education and that effective planning that results in programs that meet the needs of students and society is the underlying purpose and goal of vocational-technical education.

> The ultimate impact of effective planning will be quality curricula that provide the opportunity for student development. Furthermore, graduates will be able to seek and obtain employment as well as carry on activities that fulfill personal needs in their lives (p. 49).

With the increased technological changes and the resultant changes in the world of work, it has become necessary for vocational teachers to update and upgrade their skills. It is, therefore, imperative for vocational teachers to be engaged in professional improvement. It is not a requirement that administrators and other teachers in technical high schools in Jamaica have the skills in planning and evaluation of vocational-technical programs in order to

be certified. (That is, no formal courses in planning and evaluation of vocational-technical courses are required for certification). Additionally, there is little inservice training being provided for administrators of technical high schools.

Statement of the Problem

The problem with which this study was concerned was that vocational-technical programs in Jamaica are not as effective as desired because administrators do not demonstrate the skills and knowledge necessary to effectively plan and evaluate those programs.

Purpose of the Study

The purpose of this study was to conduct a needs analysis for an administrators' inservice training program in the planning and evaluation of vocational-technical programs in Jamaican technical high schools.

Objectives of the Study

The primary objectives of the study were: (1) to determine the status of the skills used by administrators for planning and evaluation of vocational-technical programs in Jamaican technical high schools; (2) to determine the adequacy and effectiveness of planning and evaluation of programs as perceived by administrators; and (3) to determine the extent to which administrators were desirous of participating in inservice training in the area of program planning and evaluation.

Assumption

The following assumption underlies this study: It was assumed that the self-assessment provided by the respondents is a reasonable and accurate assessment.

Definition of Terms

Administrators: For the purpose of this study, "administrator" as used in the Jamaican context is a member of the school staff who performs the duties of principal, vice principal or head of a department.

Vice Principal: For the purpose of this study, "vice principal" as used in the Jamaican context is a member of the school staff who performs the duties of an assistant principal.

Technical High School: For the purpose of the study, "technical high school" as used in the Jamaican context is an institution offering vocational-technical programs and general education programs from grades eight through twelve. (Similar to comprehensive high schools in Oklahoma).

Assistant Chief Education Officer of Vocational-Technical Education: For the purpose of this study, "assistant chief education officer of vocational-technical education" as used in the Jamaican context is one who carries out the functions of total supervision of all aspects of vocational-technical education. (Similar to director of the state department of vocational-technical education).

Traditional High Schools: For the purpose of this study, "traditional high schools" as used in the Jamaican context are schools that place emphasis on academic courses (that is, schools that offer

limited vocational-technical courses).

Teacher: For the purpose of this study, the word "teacher" as used in the Jamaican context is synonymous to the work "instructor".

Practicals: "Hands-on", i.e. learning by doing.

Specialists: For the purpose of this study, "specialist" as used in the Jamaican context is the educational qualification of an individual who has successfully completed the requirements of the three-year course leading to the diploma in technical education. This course is designed for the training of teachers of vo-tech courses.

Teacher Training: For the purpose of this study, "teacher training" as used in the Jamaican context, is a three-year course for the training of teachers of general education subjects.

Secondary Schools: For the purpose of this study, "secondary schools" as used in the Jamaican context are schools offering limited vocational courses from grades seven to ten. The emphasis is on preparing students with entry-level job skills.

CHAPTER II

REVIEW OF LITERATURE

The purpose of this study was to conduct a needs analysis for an administrator's in-service training program in the planning and evaluation of vocational-technical programs in Jamaican technical high schools. In order to gain further insight into the area of planning and evaluation of vocational-technical programs, an examination of existing literature was considered necessary. This chapter presents a review of existing literature of published and unpublished materials related to the problem being investigated. The following areas of the literature were reviewed: (1) program planning in vocational-technical education, (a) significance, (b) skills and abilities needed by administrators; (2) program evaluation in vocational-technical education, (a) importance, (b) techniques; and (3) planning and evaluation certification requirements and regulations for administrators in technical high schools in Jamaica.

Significance of Program Planning in Vocational-Technical Education

The main purpose of vocational-technical education is to meet a country's need for trained technicians and skilled workers, thus contributing to a nation's productivity. The view is expressed by the National Center for Research in Vocational Education (NCRVE) (6) that,

whether students need to be trained, retrained or upgraded, vocational-technical programs must be relevant and of the highest quality if they are to meet the needs of the students, the employment needs of the local community and provide for economic development. Without effective planning, the goals of vocational-technical education are not likely to be achieved. If vo-tech programs are to be relevant and of the highest quality, effective planning is vital.

A meaningful planning base is a necessary first step to success in a business, an industry or a program in a school. The importance of effective planning in vo-tech education cannot be overemphasized. Emch (11); Finch (13); Gleason & Beth (15); Henderson (16); Kaufman (18); Lamar, Gyuro, Burkett, and Gray (20); Malinski (21); Marron & Lynn (22); NCRVE (6); Tuttle (33); and UNESCO (8) all attest to the important role of planning in developing meaningful vo-tech programs. Emch (11) maintained that without planning there would be little sense of purpose, direction or achievement.

In proposing a seven-element model for effective planning in educational areas, Emch (11) suggested a sequence ranging from decisions concerning philosophy to decisions concerning financing. Drawing from Emch's model, the planning of programs in vocational-technical education should begin with a clear understanding of the philosophy of the institution that will offer the programs. A clear concept of the skills and knowledge needed by the community that the institution serves and the extent to which the school will cater to the needs of its clients, put the whole planning process into perspective. The next step is deciding which of the general education needs the institution will seek to meet--that is, deciding the objectives of the

school. When decisions have been made concerning what the institution is about and what its primary purposes are, it becomes necessary to decide on the programs that should be offered to enable the institution to achieve its objectives.

Having established what the programs will be, the groundwork is laid for a sound organizational plan. The organizational plan concerns decisions regarding the different personnel and the interrelationships that exist among the various positions. The number and types of persons as well as the qualifications they should possess in order that the programs selected can best be carried out is the next stage in Emch's planning model. At this stage of the planning process it becomes necessary to make decisions regarding the number, kind, quality, and location of facilities required in order that the staff can effectively carry out the programs selected.

The final stage in Emch's model is determining the operating and capital funds required to enable the institution to carry out its plans and achieve its objectives. At this stage decisions have to be made concerning acquisition of funds--where and how the funds will be obtained.

Emch (11) emphasized that a proper sequence--from philosophy to financing--is important and "deviations from this sequence can lead to serious confusion of ends and means" (p. 47). According to Emch unless educational planning is based on the school's philosophy, a clear conception of what the school is trying to accomplish will be lacking.

The literature revealed varying views concerning the sequence in planning the different elements of a vocational-technical program. Finch (13) stated that the decisions regarding program content should

be made before the goals and objectives of the institution are established. Finch advocated a needs analysis of the work place as a first step and when these needs are known then the institution can formally establish its goals and objectives.

> While it would be possible first to establish goals and objectives and then move on to the identification of content, the end result might be lack of content relevance. When content derived from the world of work precedes the formal establishment of goals and objectives, the result will be more tangible, meaningful curriculum outcomes (p. 134).

NCRVE (6) proposed a program planning model (See Appendix D) for vocational education comprising nine steps which should result in the design, implementation, and evaluation of vocational education programs which meet the identified needs and goals. The Center advocates that planning be conducted annually as rapid technological changes necessitate the re-definition of program goals and objectives.

The first step in this planning model involves a careful review of the educational philosophy and goals of the overall education system and an analysis of the values, expectations and resources of the community to determine their implications for vocational-technical education. This analysis is important, the Center states, as programs for vocational education should not operate in isolation from the community or area that they are intended to serve, nor should they operate apart from the total educational system of which vocational education is generally a subsystem.

Assessing the vocational-technical training needs and interests of present and prospective students, secondary as well as adults, is the next step in the model. The third step involves assessing labor market needs to determine the number and kinds of employment opportunities

that will be available for graduates. An assessment of current and projected job openings, the mobility of the workplace, expected labor supply and the economic outlook of the area to be served are important considerations at this stage. An analysis of data concerning the needs of students and the labor market to determine the necessary changes, if any, in the existing and new programs and related activities that are needed, is the next step.

The fifth step is the establishment of appropriate goals and objectives which should make clear the specific intent of the modified or new programs and support services to be established. Consideration of alternate methods of achieving the objectives that have been established is the next step. This is followed by selection of the best alternatives which involve members of advisory committees, staff planning committees and administrators analyzing all available data regarding proposed alternatives with a view to selecting the best ones.

The development of implementation plans is the next step. This includes staffing requirements, management procedures, designating responsibilities to individuals and allocation of funds to programs. The final step in the program planning model presented by the National Center for Research in Vocational Education is evaluation of programs and support services which provide useful information for program improvement and data for program accountability.

Stanley (31) presents four steps in occupational program planning involving eight tasks which can be useful in the design of a new program as well as the modification of ongoing programs. The first step, creation of a list of occupations, comprises three tasks: (1) gathering ideas for potential programs by assessing the needs and

interests in the community, (2) reviewing employment trends; and (3) translating the planning list to the most appropriate occupations. Analysis of occupational program needs is the next step. The three tasks of this step are: reviewing occupational and labor market information, assessing status of current available training programs and reviewing findings with employer advisory committee. The final step is program design.

Lamar, Steven, Burkett, & Gray (20) have added that setting priorities and designing feedback and updating mechanisms are also important elements in planning vo-tech education.

Although there may be variations in the sequence of the different elements of planning a program, it is evident that meaningful planning is vital to the success of vocational-technical programs. Without a clear sense of what is to be achieved and steps that should be taken in order that objectives are achieved, a sense of purpose will be lacking and little will be accomplished.

Skills and Abilities Needed by Administrators

The importance of effective planning has been the focus of many authors and researchers. Copa (3); Emch (11); Finch (13); Lamar, et al. (20); Malinski (21); Marron & Lyn (22); NCRVE (6); Tuttle (33); and UNESCO (8) agree that curriculum developers should possess the skills needed for effective planning. Administrators of institutions offering these programs should, therefore, possess the skills and abilities that will enable them to plan effectively. For example, NCRVE (6) presents nine skills that are essential and indispensable in carrying out effective program planning. These skills

are: (1) analyzing community planning base, (2) assessing individual needs and interests, (3) assessing human resource needs, (4) determining the occupational programs and support services needed, (5) establishing vocational goals and objectives, (6) considering program and support service alternatives, (7) selecting the best alternatives, (8) developing implementation plans, and (9) evaluating the resulting programs and support services.

Emch (11), Finch (13), NCRVE (6), and Wenrich & Wenrich (34) indicated that in order for administrators to demonstrate the above mentioned skills it is necessary that they possess the techniques and abilities needed to make sound decisions. The authors further postulate that in planning programs, administrators of vocational-technical schools will be faced with several decisions and the kind of decisions made will reflect the extent to which programs meet the goals and objectives for which they are intended. In the planning of vocational-technical programs, sound and effective decision-making requires relevant data on which to base program planning decisions.

Several approaches to decision-making are documented in the literature: Emch (11), Finch (13), Henderson (16), Lamar et al. (20), Pack & Kaplan (26), NCRVE (6), and Wenrich & Wenrich (34). For example, Wenrich & Wenrich (34) advocated a participative team management approach which involves decisions being made at the level closest to the people affected by them. There is general consensus among these authors that in the planning of vo-tech programs, persons who will be affected by program outcomes and those who will be involved in implementing the plans conceived should participate in the decision making process. The NCRVE (7) stated that "Although the major

responsibility for decisions rests at the highest levels, considerable experience and research have shown that a program involving educational change has the best chance of success if those directly affected play a major role in its planning" (p. 42). The authors, therefore, proposed that the inputs and recommendations of students, parents, instructors, employers, employees, and all concerned should be utilized. The feedback of information is also presented as an important aspect of effective decision making.

Wenrich & Wenrich (34) present guidelines for administrative decision making: (1) decisions should be communicated as clearly and as broadly as possible; (2) common courtesy should be adhered to; (3) people consulted about a decision should understand the guiding principle and specifically how their advice and counsel will be used; (4) decisions should be viewed in terms of long-term consequences; (5) administrators should show empathy and anticipate individuals' reaction; and (6) an understanding of sociopsychological dynamics is necessary.

Lamar, et al. (20) postulate that in decision making, choices should be based on a balanced mix of evidence and judgment thus requiring the planning process to operate with information. The authors further stated that the degree of accuracy, validity, reliability, and timelessness of the information impacts directly on the quality of the decision making process and its product--the plan.

Finch (13) stated two main stages in decision making relating to the planning of vocational-technical programs: stating the problem in clear and concise terms; and outlining the procedures for arriving at possible alternatives and the final decisions.

In a Minnesota research study designed to analyze decision making procedures through the use of simulation exercises, Copa, et al. (4), eight major factors were identified as a basis for making planning decisions. Those factors were: (1) satisfaction, (2) satisfactoriness, (3) efficiency, (4) alternative sources, (5) quality, (6) equal opportunity, (7) legal, and (8) mutual satisfaction (See Appendix E).

In planning vo-tech programs, administrators may encounter problems. It is, therefore, necessary for vo-tech administrators to possess problem-solving skills. Decision making and problem solving are interrelated. Finch (13) summarizes the problem solving approach to decision making as involving six steps:

1. identifying and defining the problem
2. analyzing the problem
3. arriving at appropriate alternative solutions
4. clarifying consequences of the alternative solutions
5. selecting the best alternative solution to the problem
6. analyzing actual consequences arising from the decision

For administrators to be able to plan vo-tech programs effectively, they should possess the skills and abilities that will enable them to do so. Regardless of the decision making approach used, all involve problem solving. The administrator should therefore possess the skills and abilities that will enable him/her to make meaningful decisions as well as solve problems that may arise. Good decision making and problem solving will result in effective programs.

> The ultimate result of effective planning will be quality curricula that provide the opportunity for student development. Furthermore, graduates will be able to seek and obtain employment as well as carry on activities that fulfill personal needs in their lives . . . this result of

> effective planning . . . is nevertheless the underlying purpose and goal of vocational education (13, p. 49).

The Importance of Program Evaluation in Vocational-Technical Education

Program evaluation has been defined as "the collection of information and judgments from a variety of sources to facilitate planning, to aid in the improvement of programs, and to meet accountability demands" (9, p. 11). The evaluation of vo-tech programs, therefore, involve making judgments about the value of programs and determining the extent to which the objectives of programs have been achieved.

The need for program evaluation has been the focus of many authors and researchers [Anderson (1), The Center for Vocational Education [CVE] (12), Finch (13), NCRVE (6), NCRVE (7), UNESCO (8), Wentling (35), Wenrich & Wenrich (34)]. There is general agreement among the authors concerning the importance of program evaluation. They stated that program evaluation is important as systematic and effective program evaluation provide valid information regarding program improvement. The authors further emphasized that the most important function of program evaluation is to seek program improvement. Administrators, instructors and others in involved in the process of vo-tech education need valid and reliable information concerning the successes and failures of programs in order that steps can be taken to effect the changes needed to improve programs. The authors posit that appropriately conducted program evaluation can provide such information. According to NCRVE (7), program evaluation can also help to ensure that planning decisions concerning the improvement of

programs is based on the best available figures and facts.

There is further consensus among Finch (13), CVE (12), NCRVE (7), NCRVE (9), Wenrich & Wenrich (34), and Wentling (35) that program evaluation can ensure that instruction is relevant and current. Agreement is also expressed among the authors that the evaluation of vo-tech programs can also determine the adequacy of equipment and facilities, the effect of program on students and the level of employers' satisfaction.

Another importance of evaluation conveyed in the literature is that it assists in making and justifying decisions. The NCRVE (9) in discussing the importance of valid decision making, reiterates the need for administrators, instructors, program planners, and others involved in vo-tech education to rely on knowledge and evidence to make decisions. Evaluation, the source continues, can provide such evidence that assists in making decisions about various aspects of vo-tech programs. It is further suggested that in making decisions regarding necessary program changes, student selection, training and upgrading of personnel, and budgetary allocations, evaluation is of considerable importance.

In addition, evaluation is important as one of its aims is to satisfy accountability demands. Vo-tech education is a costly venture. Wenrich & Wenrich (34), Darcy (5), and Smith (30) maintain that accountability is an important aspect of evaluation. Wenrich & Wenrich (34), and NCRVE (9) explain that expenditures to provide qualified staff, up-to-date equipment, materials and supplies and their support for effective functioning of vo-tech programs are generally high. Taxpayers deserve justification that monies invested in vo-tech

education are being used effectively and efficiently. Evaluation can provide evidence of the outcomes of programs thus indicating whether the money spent on vo-tech education was a worthwhile investment. Through the evaluation of vo-tech programs, the community can also be provided with information as to whether programs are adequately and efficiently serving community needs.

The literature indicates, (NCRVE (9), that program evaluation can also help to promote vocational programs. Evaluation reports can provide balanced information to the community, instructors, administrators, and other members of a school staff about the successes and weaknesses of vo-tech programs. This type of report can help to enhance the image of vo-tech education and provide a means for gaining and maintaining support. It can also help with student recruitment.

Darcy (5) and Smith (30) concurred that evaluation of programs is important because it is a legal requirement. Parks and Summers (27) stated that evaluation of any program is necessary to determine if the program is meeting its objectives and to make changes as the program progresses.

Program Evaluation Techniques

The literature contains much information concerning techniques that can be used in the process of evaluating vocational-technical programs [CVE (12), Brantner (2), Darcy (5), Duff & Dold (10), Finch & Crunkilton (13), Gilli (14), McFarlane & Claudy (23), NCRVE (9), Pritz (28), Smith (30), Stufflebeam (32), Wenrich & Wenrich (34), Wentling (35), Wolonsky (36)]. According to these sources, techniques commonly

used to evaluate vocational-technical programs include:

1. student interest survey
2. learner assessment
3. student evaluation of instruction
4. student follow-up survey
5. employer survey
6. evaluation of instructional material
7. evaluation of facilities and equipment
8. the assessment of personnel
9. evaluation of community resources
10. cost/outcome analysis
11. visiting - team evaluation

The use of a student interest survey as an evaluation technique is supported by CVE (12), NCRVE (9) and Wentling (35). This technique is designed to aid in the collection and use of information concerning students' career interests. Standardized interest inventories or locally developed instruments may be used to conduct these surveys. The research states that various groups such as students, teachers, counselors, and curriculum specialists should be involved in this type of activity.

Learner assessment stresses the use of student data in program evaluation. CVE (12), NCRVE (9), Stufflebeam (32), Wentling (35), and Wenrich & Wenrich (34) maintain that this is an appropriate technique for assessing the achievement of competencies specified by program objectives. The authors conclude that various types of instruments can be used to conduct this type of assessment including paper and pencil achievement tests, product rating and attitude scales. Wentling (35)

further stated that "By combining a number of student measures on a number of individuals, a profile may be developed. A comparison of this profile to desired program or course outcome will indicate areas which need improvement" (p. 36).

Student evaluation of instruction involves the use of a questionnaire or rating form administered to program enrollees to obtain information concerning the effectiveness of instruction. This technique which was strongly recommended by CVE (12), NCRVE (9), Stufflebeam (32), Wentling (35), and Wolansky (36) aims at obtaining information which can be used to arrive at suggestions for improving classroom instruction.

There is general agreement among Brantner (2), Darcy (5), Duff & Dold (10), Finch & Crunkilton (13), and Pritz (28) that the student follow-up survey is an important aspect of program evaluation. This technique is usually conducted by the use of a mail questionnaire, telephone or personal interview and involves contacting former students to gather information concerning strengths and weaknesses of programs they have recently completed. Finch & Crunkilton (13) maintain that dropouts should be included in such a survey as they can provide valuable planning information. This type of follow-up study can also help to determine the effectiveness of programs in terms of job placement. Wenrich & Wenrich (34) stated that student follow-up surveys can help the institution to structure its continuing education programs to meet the needs of graduates for new skills.

Stufflebeam (32), Wenrich & Wenrich (34), Wentling (35), CVE (12), and NCRVE (9) agree that the employer survey is an important evaluation technique for assessing the on-the-job performance of former students

and determining the appropriateness of program objectives to the competencies desired by employers and employees. This kind of survey conducted by using mail questionnaire, telephone or personal interview can also help to identify program strengths and weaknesses.

Evaluation of instructional material is designed to assess the adequacy and utilization of materials for programs with a view to improving the collection and use of materials. Finch & Crunkilton (13) and NCRVE (9) support the use of this technique in program evaluation. NCRVE (9) recommended that a combination of methods be used for evaluating instructional materials. These methods include survey, staff and student rating of materials.

The National Center for Vocational Education (12), Stufflebeam (32) and NCRVE (9) agree that evaluation of facilities and equipment is a necessary part of program evaluation. This technique is designed to determine the adequacy of existing facilities and equipment. The purpose of this type of evaluation is to determine the necessary expansion, renovation or abandonment of facilities and equipment.

Stufflebeam (32) and Wentling (35) expressed agreement on the evaluation of personnel performance as an integral part of program evaluation. Wentling (35) recommended that students, observation by peers and self-observation should form part of this evaluation technique. Wentling further stated that this type of evaluation can result in the identification of deficiencies in staff members and recommendations for improvement.

The evaluation of community resources aims at assessing the availability and effectiveness of resources within the community, such as prospective members of advisory committees, guest speakers and field

trips. NCRVE (9) supports this technique as a part of the process of program evaluation. Mail questionnaire and telephone surveys are used to identify the resources available. This results in a resource file being established. A further step involves rating of community resources by staff and students. The results of this rating contributes to improving the selection of outstanding resources.

Cost/Outcome Analysis involves the collection of cost information from instructors and existing records such as test scores and follow-up results to determine the relationship between cost and program outcome. Wentling (35) and NCRVE (9) concurred that this is a valuable program evaluation technique. They stated that the result of this evaluation can help to increase the efficiency of instruction and can assist in making decisions about program alternatives.

Wentling (35), CVE (12) , NCRVE (7), and NCRVE (9) recommended the consultative team evaluation as an integral part of program evaluation. This technique involves a visiting team comprising educators, representatives of business and industry and former students visiting the school to assess programs. The team observes and studies available information as well as conducts interviews to arrive at conclusions concerning programs. The main aim of this approach is to gather reliable information in order that recommendations can be made for improving deficiencies that are identified.

Norton & McCaslin (25) recommended guidelines which should be considered when selecting techniques for evaluating vocational-education programs. They included:

> (1) in selecting the types of evidence needed to indicate the degree of success or failure, the focus must be on essential, rather than nice to know, information; (2) the

> possibility of staff and student sensitivity to evaluation must be considered; (3) the time required to complete the instrument(s) must be taken into account; (4) the questions should reflect specific program objectives and/or process variables; (5) the instruments should have clear directions and be easy to administer; (6) the assessment times should be objective; and (7) the confidentiality of individual responses should be assured (p. 335).

Holcomb (17) in stating desirable qualities in an evaluation, emphasized that evaluations must reflect high standards of professionalism: the integrity of the evaluation staff; protection against systematic bias in the formation of questions, collection of data and analysis, and interpretation of findings.

Planning and Evaluation Certification Requirements and Regulations for Administrators in Jamaican Technical High Schools

The Code of Regulations (24) does not specify Planning and Evaluation Certification requirements in order for a teacher to be hired as an administrator of a technical high school in Jamaica. The Code of Regulations (24) states that:

> For appointment as a principal, a teacher is required to be a registered trained teacher with at least three years of approved service as a trained teacher unless the requirements are varied in any particular case (p. 46).

A registered trained teacher is a teacher who has successfully completed a three-year course at a teachers' training college. The teachers training college trains teachers mainly for primary and secondary schools (Grades 1-11). Teacher training also takes place at the University of the West Indies School of Education; the College of Arts; Science and Technology (CAST); the School of Agriculture; and the

Cultural Training Center (CTC). A teacher is registered by the Ministry of Education on successful completion of the teacher training course at one of the above mentioned institutions.

In order for a teacher to be hired as a principal of a technical high school, the teacher should, in addition to being a trained teacher, have at least a baccalaureate degree from an accredited institution.

The qualification required for the position of vice principal is similar to that of the principal. To be appointed as vice principal, the teacher has to be recommended, to the Ministry of Education, by the school board (24). The recommendation is then reviewed by the appropriate officers in the Ministry of Education and the decision for appointment is made.

For a teacher to be appointed as head of department he/she must be certified and recommended by the principal to the Ministry of Education. After a review of the recommendation by the relevant officers, a decision is made concerning the appointment (24).

Summary

The literature reviewed in this chapter represents a sample of the vast amount of writing that has been done on program planning and evaluation in vo-tech education. The literature emphasized that the planning of vo-tech programs is vital if vo-tech education is to be meaningful. Without planning, purpose and direction will be lacking and little will be achieved.

Evaluation was presented in the literature as an integral part of the process of vo-tech education. The review of literature

showed strong support for evaluation being continuous and for the use of a combination of techniques.

Key points to be borne in mind in evaluating vo-tech programs include: commitment by those involved, evaluation being product-oriented; conducting evaluation in terms of programs objectives; and procedures and techniques being comprehensible to the public.

CHAPTER III

METHODOLOGY

The purpose of this study was to gather information needed to develop an inservice training program, for administrators in the planning and evaluation of vocational-technical programs in technical high schools in Jamaica. To fulfill the purpose of the study, it was necessary to accomplish the following steps: (1) research and review literature to identify methods utilized in the areas of planning and evaluation of vocational-technical programs; (2) develop a questionnaire response form; (3) collect the data; (4) analyze the data; and (5) write a summary and recommendations of the findings. This chapter is devoted to reporting the methods used to accomplish the purpose of the study. It is divided into the following sections: (1) design, (2) definition of the population, (3) instrumentation, (4) procedure, (5) administering the questionnaire, and (6) analysis procedures.

Design of the Study

The design of the study was considered to be descriptive research. The research attempted to describe the current status of planning and evaluation of vocational-technical programs in technical high schools in Jamaica. The purpose of the survey developed for the descriptive research was to collect detailed descriptions of the above

with the intent of using the data to specify the need for inservice training of administrators in technical high schools in Jamaica, in the area of planning and evaluation of vo-tech programs.

Definition of the Population

The population for the study consisted of administrators of the seven technical high schools in Jamaica and four secondary schools that were being upgraded to technical high schools. The total number of subjects was 77 (11 principals, 11 vice principals and 55 heads of program departments).

Instrumentation

A questionnaire was developed and administered to collect relevant data regarding the current status of the planning and evaluation of programs in technical high schools and to find out if administrators desire to participate in inservice training in the area of planning and evaluation of vocational-technical programs. The style of the questionnaire used to collect the data was self-reporting and consisted of four parts: (1) demographic data, (2) items relating to program planning, (3) items relating to program evaluation, and (4) items designed to find out if administrators desire to participate in inservice training. The questions were developed from lists of planning and evaluation competencies developed by the NCRVE (6) and (9).

The questionnaire was kept brief and consisted of 25 items. The time of completion on the questionnaire averaged 11 minutes.

Procedure

Prior to the full scale survey, a questionnaire, along with a questionnaire evaluation (See Appendix B) was completed by ten persons who had worked in some aspect of vocational-technical education in Jamaica. The questionnaire evaluation was used to (1) determine the clarity of the statements, (2) determine the style of the questionnaire, (3) determine the length of the questionnaire, (4) determine the overall impression of the questionnaire, and (5) determine suggestions for improving the questionnaire.

Suggestions were given for improvement. From those suggestions, minor changes were made on the basic instrument for clarity after which a final draft was compiled. A copy of the questionnaire is included in Appendix A.

Administering the Questionnaire

The revised questionnaires were mailed (sent by courier) to the Assistant Chief Education Officer of vocational-technical education in the Ministry of Education in Jamaica who agreed to supervise the distribution and collection of the survey. Attached to each questionnaire was a cover letter (See Appendix C) requesting cooperation from the subjects, explaining what the study was investigating and giving instructions for filling out the questionnaire. The letter assured subjects of anonymity.

The initial mailing occurred on June 23, 1987. The deadline designated for the return of the questionnaires was July 17, 1987. Only 13 were returned by the deadline, yielding an initial response rate of 16.88. Telephone calls to all the schools and personal visits

with three principals resulted in a further 38 responses. This brought the number of responses to 51 or 66 percent of the 77 questionnaires. Time lines and geographical distance prohibited additional follow-up or reminders to improve the response rate.

Analysis Procedures

Data obtained from the questionnaires were individually hand coded onto COBOL coding forms. The data analysis was done utilizing the Statistical Package for Social Sciences (SPSS-X) programs at the Oklahoma State University Computer Center. The data were tabulated using descriptive statistics consisting of (1) Frequency, (2) Percentage, (3) Mean, and (4) Chi Square.

The questionnaire yielded data in the following areas:

1. demographic
2. program planning
3. program evaluation
4. professional and staff development.

Percentages, frequencies and means were used to analyze data collected on number one through four above relative to the objectives of the study.

The Chi Square technique was used in the analysis of the data relative to the second objective of the study which was to determine the adequacy and effectiveness of planning and evaluation of programs as perceived by administrators. The Chi Square technique was used to test for the difference between the principals and vice principals (combined) and the heads of departments on items four, and six through

nine relative to the second objective.

The Chi Square technique is a suitable test for significant relationships where variables are best defined as discrete variables. Yates Correction was run to obtain an accurate assessment. Siegel (29) stated that Yates Correction is appropriate for removing errors that may occur when expected frequencies are small. The .05 level of significance was selected as the level which must be attained before the investigator would identify the difference between selected variables as being significant.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

The purpose of this chapter is to present and analyze the statistical data from the collected questionnaires. The purpose of the study was to conduct a needs analysis for an administrator's inservice training program in the planning and evaluation of vocational-technical programs in Jamaican technical high schools. A survey was conducted with the administrators to determine that need.

The objectives of the study were: (1) to determine the status of the skills used by administrators for planning and evaluation of vocational-technical programs in Jamaican technical high schools; (2) to determine the adequacy and effectiveness of planning and evaluation of programs as perceived by administrators; and (3) to determine the extent to which administrators were desirous of participating in inservice training in the area of program planning and evaluation.

A total of 51 of the 77 questionnaires were returned yielding a response rate of 66 percent. The results are shown in Table I. For the purpose of this chapter, analysis of the data will be presented as follows: (1) demographic data, (2) program planning, (3) program evaluation, and (4) professional development.

TABLE I

DISTRIBUTION OF RESPONDENTS BY QUESTIONNAIRE MAILING

Total Mailed	Initial Returned	Follow-up Returned	Total Returned	Total Percentage
77	13	38	51	66

Demographic Data

In Tables II through VII, demographic information on the respondents was compiled. Data indicated (Table II) that nine (17.6 percent) of the respondents were principals, 11 (21.6 percent) were vice principals, and 31 (60.8 percent) were heads of departments.

Table III reports the areas of specialization of the respondents. The category with the highest number of respondents was administration which had 11 (21.6 percent of the total population). The second highest category was Home Economics with eight (15.7 percent) respondents. Six of the respondents reported that their areas of specialization were other than those listed. Their specialization was in the areas of Arts and Crafts, English, Mathematics and Biology and Chemistry.

Contained in Table IV are data on the variety of educational levels attained by respondents. The category with the highest number of respondents was Specialists with 25 (49 percent). This was followed by the baccalaureate degree with 17 (33.3 percent). One respondent reported not having any formal training as a teacher and has not completed requirements for the baccalaureate degree.

Table V displays the distribution of respondents' years of professional employment in vo-tech education in a technical high school. The reported range of years was from three years to 30 years. Approximately 50 percent of the respondents reported being employed professionally in vo-tech education in a technical high school from three to ten years; 23.5 percent from three to six years and 25.4 percent from seven to ten years. The mean number of years that respondents were employed professionally in vo-tech education in a technical high school

TABLE II

DISTRIBUTION OF RESPONDENTS BY PROFESSIONAL TITLE

Professional Title	Frequency	Percent
Principal	9	17.6
Vice Principal	11	21.6
Heads of Departments	31	60.8
Total	51	100.0

TABLE III*

DISTRIBUTION OF RESPONDENTS BY AREAS OF SPECIALIZATION

Specialization	N	Percent
Administration	11	21.6
Agriculture	3	5.9
Woodwork	6	11.8
Business and Office Education / Computer Studies	6	11.8
Auto Mechanics	1	2.0
Electricity/Electronics	4	7.8
Home Economics	8	15.7
Machine Shop/Welding	6	11.8
Other	6	11.8
Total	51	100.0

*Totals do not equal 100.0 percent due to rounding.

TABLE IV

DISTRIBUTION OF RESPONDENTS BY EDUCATIONAL LEVEL

Educational Level	N	Percent
Teacher Training	6	11.8
Specialist	25	49.0
Baccalaureate Degree	17	33.3
Graduate Degree	2	3.9
Other	1	2.0
Total	51	100.0

TABLE V

DISTRIBUTION OF RESPONDENTS BY YEARS OF PROFESSIONAL EMPLOYMENT IN A TECHNICAL HIGH SCHOOL

Years of Professional Employment	N	Percent
3 - 6	12	23.5
7 - 10	13	25.4
11 - 14	11	21.6
15 - 18	8	15.7
19 - 22	2	3.9
23 - 26	4	5.9
27 - 30	1	4.0
Total	51	100.0

Mean 11.88

was 11.9. There was no significant difference in years of professional employment of principals and vice principals and heads of departments. For Chi Square analysis see Table VI.

Table VII illustrates the respondents' years of practical experience in their vocational field of specialization. Twenty-one (41.2 percent) of the respondents had no practical experience in their vocational field of specialization. Of the remaining 30 respondents, nine had one year of practical experience. The mean number of years of practical experience of respondents in their vocational field of specialization was 5.8.

Program Planning

One of the primary purposes of the study was to determine the status of the skills possessed by administrators for planning of vo-tech programs in Jamaican technical high schools. Items six through 16 on the questionnaire were designed to gather information relative to that obejctive. Tables VIII through XXIV show the results of the inquiry as they were reported.

The survey questionnaire asked the study participants whether their schools had a written philosophy. Table VIII shows that only 49 percent of the respondents replied in the affirmative. There was no significant difference in the response of heads of departments and principals and vice principals to this item. For Chi Square analysis see Table IX.

Responses to the question, Are the objectives of your institution defined? are presented in Table X. Forty-two (82.4 percent) of the respondents indicated that the objectives of their institution were

TABLE VI

CHI SQUARE ANALYSIS OF YEARS OF PROFESSIONAL EMPLOYMENT

Administrators	Years of Professional Employment																		
	3	4	5	6	7	8	9	10	11	12	13	14	15	17	18	20	25	26	30
Principal and Vice Principal	1		1	2	1	1			1	1	1	1		3	3	1	2	1	
Head of Department	2	2	1	3	4	1	4	2	3	2	2		1		1	1	1		1

Chi Square = 18.83
df = 18
p <.40

TABLE VII*

DISTRIBUTION OF RESPONDENTS BY YEARS OF PRACTICAL EXPERIENCE

Years of Practical Experience	N	Percent
0	21	41.2
1	9	17.6
2	3	5.9
3	4	7.8
5	1	2.0
8	1	2.0
9	3	5.9
10	2	3.9
12	3	5.9
17	1	2.0
20	1	2.0
27	1	2.0
35	1	2.0
Total	51	100.0

Mean 5.8

*Totals do not equal 100.0 percent due to rounding.

TABLE VIII

RESPONSES TO PROGRAM PLANNING ITEM CONCERNING WRITTEN PHILOSOPHY

Response	Frequency	Percent
Yes	25	49.0
No	26	51.0
Total	51	100.0

TABLE IX

CHI SQUARE ANALYSIS OF ITEM CONCERNING WRITTEN PHILOSOPHY

Administrator	Yes	No
Principal and Vice Principal	13	7
Department Head	12	19

$Chi^2 = 2.33$
$df = 1$
$p < .12$

TABLE X

RESPONSES TO PROGRAM PLANNING ITEM CONCERNING DEFINITION OF OBJECTIVES

Response	Frequency	Percent
Yes	42	82.4
No	9	17.6
Total	51	100.0

defined. The Chi Square analysis of the question reflected no significant difference in the responses of principals and vice principals and heads of departments. For a complete analysis see Table XI.

Item number eight is displayed in Table XII. Thirty-nine (76.5 percent) of the respondents indicated that the objectives of their institution were achievable in light of current philosophy. The seven participants who did not respond to this item, had responded negatively to item number seven, indicating that the objectives of their institution were not defined. The Chi Square analysis showed no significant difference in the responses of the two categories of administrators. Twenty-two heads of departments (56.4 percent) indicated that the objectives were achievable, while 17 (43.6 percent) of the principals and vice principals indicated that the objectives were achievable. The Chi Square analysis is presented in Table XIII.

In answer to the question pertaining to an overall advisory committee, 20 respondents or (39.2 percent) indicated that their schools did have an overall advisory committee, while 30 or (58.8 percent) indicated that they had no overall advisory committee (See Table XIV). As displayed in Table XV, the Chi Square analysis of this question reflected that there was no significant difference in the responses of the administrators.

Item number ten asked respondents if there was an advisory committee for each program. Fourteen (27.7 percent) indicated that each program had an advisory committee, while 37 (72.5 percent) said that each program did not have an advisory committee (See Table XVI). As reflected in the Chi Square analysis of this question, there was no

TABLE XI

CHI SQUARE ANALYSIS OF ITEM CONCERNING DEFINITION OF OBJECTIVES

Administrators	Yes	No
Principal and Vice Principal	19	1
Head of Department	23	8

Chi^2 = 2.33
df = 1
$p < .12$

TABLE XII

RESPONSES TO PROGRAM PLANNING ITEM CONCERNING ACHIEVEMENT OF OBJECTIVES

Response	Frequency	Percent
Yes	39	76.5
No	5	9.8
No Response	7	13.7
Total	51	100.0

TABLE XIII

CHI SQUARE ANALYSIS OF ITEM CONCERNING ACHIEVEMENT OF OBJECTIVES

Administrators	Yes	No	No Response
Principal and Vice Principal	17	2	1
Head of Department	22	3	6

$Chi^2 = 2.13$
$df = 2$
$p < .34$

TABLE XIV

RESPONSES TO PROGRAM PLANNING ITEM CONCERNING OVERALL ADVISORY COMMITTEE

Response	Frequency	Percent
Yes	20	39.2
No	30	58.8
No Response	1	2.0
Total	51	100.0

TABLE XV

CHI SQUARE ANALYSIS OF ITEM CONCERNING OVERALL ADVISORY COMMITTEE

Administrators	Yes	No	No Response
Principal and Vice Principal	6	14	
Head of Department	14	16	1

$Chi^2 = 2.05$
$df = 2$
$p < .35$

TABLE XVI

RESPONSES TO PROGRAM PLANNING ITEM CONCERNING PROGRAM ADVISORY COMMITTEE

Response	Frequency	Percent
Yes	14	27.5
No	37	72.5
Total	51	100.0

significant difference in the administrators' responses. For a complete analysis see Table XVII.

The administrators who had responded that there was an advisory committee for each program were asked to indicate the composition of program advisory committees. This item offered ten possible responses. Respondents could have chosen as many responses as applied (See question 11, Appendix A). As displayed in Table XVIII, program advisory committees are comprised mainly of vocational teachers and vocational administrators. Of the 14 respondents who reported the existence of program advisory committees in their schools, 13 or 92.9 percent indicated that vocational teachers were members and ten or 72.4 percent stated that membership included vocational administrators. Only two respondents (14.3 percent) indicated that the membership of program advisory committees comprised employer and students, while one respondent reported that successful graduates of programs were members of program advisory committees.

To determine the administrators' perceptions of the role of an advisory committee, respondents were asked to rank from one (most important) to seven (least important), the role of an advisory committee as they perceived it to be. The results are displayed in Table XIX and Figure 1. Twenty-six respondents (51 percent) indicated that assisting in identifying skills needed by industry was the most important role of an advisory committee. Assisting in the establishment of program standards and in the development of course content and materials were seen as equal in importance by 14 or 27.4 percent of the respondents and were both ranked second. Fifteen respondents or 29.4 percent selected assisting in the development of course content and materials

TABLE XVII

CHI SQUARE ANALYSIS OF ITEM CONCERNING ADVISORY COMMITTEE

Administrators	Yes	No
Principal and Vice Principal	3	17
Head of Department	11	20

$Chi^2 = 1.63$
$df = 1$
$p < .20$

TABLE XVIII*

COMPOSITION OF ADVISORY COMMITTEE

Advisory Committee Composition	Number of Respondents	Percent
Employees in Related Areas	6	42.9
Vocational Teachers	13	92.9
Curriculum Planners	3	21.4
Employers (Business and Industry)	2	14.3
Successful Graduates of Programs	1	7.1
Vocational Director or Supervisor	6	42.9
Chairman of School Board	6	42.9
Politician	0	
Students	2	14.3
Vocational Administrators	10	71.4
Other	0	0.0

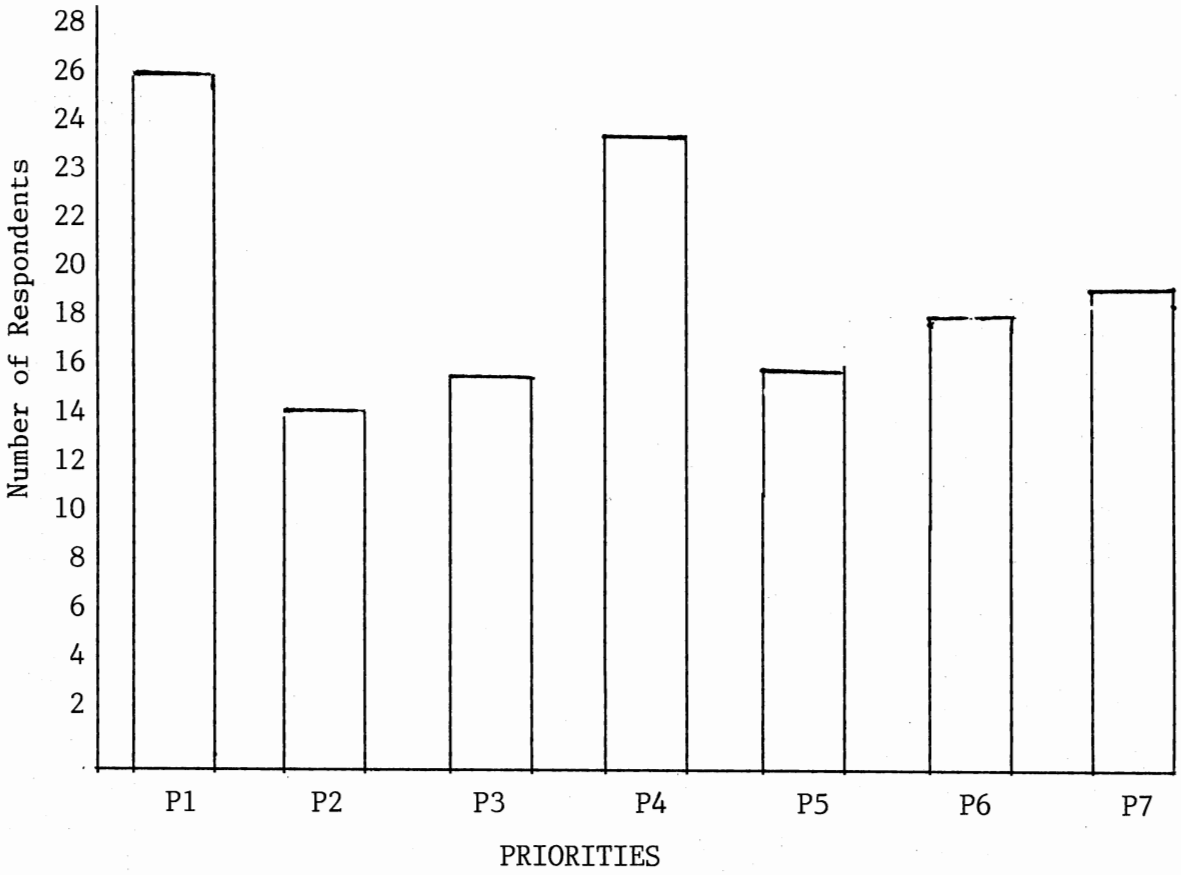
*This table is based on 14 respondents--the total number that reported the existence of a program advisory committee.

TABLE XIX

RESPONSES TO PROGRAM PLANNING ITEM CONCERNING ROLE OF ADVISORY COMMITTEE (ITEM 12)

Category	Ranking													
	*P1		P2		P3		P4		P5		P6		P7	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Identify Skills	26	51	7	13.7	7	13.7	3	5.9	2	3.9	4	7.8	2	3.9
Establish Program Standards	9	17.6	14	27.5	13	25.5	0	11.8	6	11.8	3	5.9	6	11.8
Develop Course Content & Materials	6	11.8	14	27.5	15	29.4	3	5.9	2	3.9	8	15.7	3	5.9
Place Graduate	7	13.7	4	7.8	7	13.7	3	5.9	7	13.7	3	5.9	19	37.3
Provide Financial Assistance			6	11.8	5	9.8	24	47.1	5	9.8	7	13.7	5	9.8
Provide Equipment & Supplies	2	3.9	6	11.8	4	7.8	4	7.8	16	31.4	18	35.3	1	2.0
Program Evaluation							14	27.5	13	25.5	8	15.7	15	29.4

*P = Priority



Respondents' ranking, from 1 (most important) to 7 (least important) of, the role of advisory committee

Priority 1: Identify skills

Priority 2: Establish program standards and develop course content and materials

Priority 3: Develop course content and materials

Priority 4: Provide financial assistance

Priority 5: Provide equipment and supplies

Priority 6: Provide equipment and supplies

Priority 7: Place graduates

Figure 1. Responses to Program Planning Item Concerning Role of Advisory Committee (Item 12)

as the third priority. Providing financial assistance to the school was ranked fourth by 24 or 47.1 percent of the respondents. Sixteen respondents or 31.4 percent indicated that providing equipment and supplies was fifth in importance. Providing equipment and supplies was also ranked sixth by 18 (35.3 percent) respondents. Nineteen respondents or 37.3 percent ranked placing graduates in jobs as the least important role of an advisory committee. Assisting with program evaluation was not perceived by respondents to be an important role of an advisory committee.

Item number 13 asked participants whether surveys were conducted in order to determine which vo-tech programs should be offered in their schools and, if so, what were the purposes of such surveys. Three purposes were listed as possible answers. Respondents were asked to choose as many as applied and had the option of specifying purposes other than those listed. As displayed in Table XX, 20 respondents (39.2 percent) indicated that no surveys were conducted in order to determine which vo-tech programs should be offered. Table XXI shows the responses of participants who reported that surveys were conducted. Eighteen respondents (58.0 percent) indicated that surveys were conducted to determine skills needed by employers while 20 (64.5 percent) stated that the surveys were conducted to determine students' interest in programs. Seventeen respondents (54.8 percent) reported that surveys were conducted to determine current and future labor demand. The four respondents who indicated that other types of surveys were conducted, specified the following types: (1) surveys to determine the availability of qualified instructors, and (2) surveys to determine programs that were currently being offered.

TABLE XX

RESPONSES TO PROGRAM PLANNING ITEM CONCERNING SURVEYS (ITEM 13)

Respondents	Frequency	Percent
Number Indicating No Surveys Conducted	20	39.2
Number Indicating Surveys Conducted	31	60.8
Total	51	100.0

TABLE XXI*

RESPONSES TO PROGRAM PLANNING ITEM CONCERNING SURVEYS (ITEM 13)

Purpose of Surveys	Frequency	Percent
To Determine Skills Needed by Employers	18	58.0
To Determine Students' Interest in Program	20	64.5
To Determine Current and Future Labor Demand	17	54.8
Other	4	12.9

*This table is based on 31 respondents. Respondents could have chosen as many variables as applied (See question 13, Appendix A).

Responses to the question about what methods were used to determine how programs can be improved are presented in Table XXII. Review and evaluation of students' interest was the method most often used, followed by review and evaluation of current and future labor demands. Thirteen respondents indicated that none of the methods listed were utilized to determine how programs could be improved. As noted at the bottom of Table XXI, the respondents could have chosen one or all three methods listed.

Table XXIII contains participants' responses to the methods used to determine program content. The method most frequently used was the drawing of ideas from various curricula as reported by 60.8 percent of the respondents. The use of information given by experts, and observation of what was being done in other schools follow in that order. Of the 13 respondents who indicated that other methods were used, 11 stated that program content was determined by syllabus of external examination boards. The respondents could have chosen one or all five methods listed, as noted at the bottom of Table XXIII.

Table XXIV illustrates item number 16. In order to determine the facilities and equipment needed for each program, input is made mainly by instructors (96.1 percent). Fourteen of the sixteen respondents who listed "other" types of input, all stated that personnel from the vo-tech unit of the Ministry of Education help determine the facilities and equipment needed for programs. As shown in Tables XXI through XXIII, the respondents could have chosen one or all four responses listed.

TABLE XXII

RESPONSES TO PROGRAM PLANNING ITEM CONCERNING PROGRAM IMPROVEMENT METHOD

Method*	Frequency	Percent
Reviewing & Evaluating Students' Interest	30	58.8
Dialogue with Employers	20	39.2
Reviewing & Evaluating Labor Demands	23	45.1
None of the Above	13	25.5

*Respondents could have chosen one or all three methods (See question 14, Appendix A).

TABLE XXIII

METHODS USED TO DETERMINE PROGRAM CONTENT

Method*	Frequency	Percent
Occupational Analysis	14	27.5
School Observation	26	51
Curriculum Inspection	31	60.8
Information by Experts	27	52.9
Other:		
External Examination Syllabus	11	21.56
Vo-Tech Leadership	2	3.92

*Respondents could have chosen one or all three methods (See question 15, Appendix A).

TABLE XXIV

RESPONSES TO PROGRAM PLANNING ITEM CONCERNING FACILITIES AND EQUIPMENT

Input*	Frequency	Percent
Instructor	49	96.1
Business & Industry Personnel	15	29.4
Experts	22	43.1
Advisory Committee Members	10	19.6
Other:		
Personnel from Vo-Tech Unit--M.O.E.	16	31.4

*Respondents could have chosen one or all four groups listed (See question 16, Appendix A).

Program Evaluation

An objective of the study was to determine the status of the skills possessed by administrators for evaluation of programs in Jamaican technical high schools. Respondents were asked what methods were used to assess students' level of competency in vo-tech programs. As shown in Table XXV, practicals were used by 96.1 percent of the respondents and paper and pencil achievement tests were used by 92.2 percent. Three other methods were stated by six respondents. However, they did not specify the type of assessment, performance tests or measurement used. As noted at the bottom of Table XXV, respondents could have selected one or both methods listed on the questionnaire.

From the question concerning whether or not the schools conducted follow-up (tracer studies) of former students, 37 respondents (72.5 percent) reported that no follow-up was conducted (See Table XXVI). Of the 14 respondents who indicated that follow-up (tracer studies) were conducted, 71.4 percent indicated that the purpose of such studies was to determine occupational fields of graduates, 21.4 percent stated they were to determine occupational fields of dropouts and 50 percent reported that they were to determine former students' perception of the strengths and weaknesses of programs (See Table XXVII). Respondents could have chosen one or all three reasons listed on the questionnaire.

Participants who had indicated that their schools conducted follow-up studies were asked to state when the last study was done. Only two of the 14 respondents provided that information. One respondent stated that the last follow-up (tracer study) was conducted one year prior to this investigation and another respondent stated that it was conducted nine months prior.

TABLE XXV

ASSESSMENT METHODS

Method*	Frequency	Percent
Paper & Pencil Tests	47	92.2
Practicals	49	96.1
Other:		
Performance Tests	1	2.0
Measurement and Comparisons	1	2.0
On-going Assessment	4	7.8

*Respondents could have chosen one or both methods (See question 17, Appendix A).

TABLE XXVI

RESPONSES TO PROGRAM PLANNING ITEM CONCERNING FOLLOW-UP STUDIES (ITEM 18)

Follow-up Studies	Frequency	Percent
Yes	14	27.5
No	37	72.5
Total	51	100.0

TABLE XXVII*

RESPONSES TO PROGRAM PLANNING ITEM CONCERNING FOLLOW-UP STUDIES (ITEM 18)

Purpose of Follow-up	Frequency	Percent
Occupational Field of Graduates	10	71.4
Occupational Field of Dropouts	3	21.4
Former Students' Perception of Programs	7	50.0

*This table is based on 14 respondents. Respondents could have chosen one or all three purposes.

The survey questionnaire asked participants whether or not employers assisted with the evaluation of vo-tech programs and, if so, in what way or ways they assisted. Table XXVIII shows that 20 respondents (39.2 percent) reported that there was no contact with employers regarding the performance of former students. Table XXIX reflects the responses of the 31 participants who indicated that employers assisted with evaluation of vo-tech programs. Twenty-three respondents (74.2 percent) stated that employers assisted by rating former students' performance on the job while 16 (51.6 percent) stated they assisted by making suggestions for program improvement. Respondents could have selected one or both responses.

Table XXX reflects participants' responses to the question concerning the methods used to assess administrators' and instructors' strengths and weaknesses in helping students to meet program objectives. Self-evaluation was the method most frequently used. This method yielded a response rate of 64.7 percent, followed by tests and/or examination results (56.9 percent). Seven respondents reported that there was no evaluation of administrators and instructors.

To determine the over-all purpose of evaluation of vo-tech programs as perceived by the administrators, participants were asked to choose one or all four purposes listed in item 21. Respondents had the option of specifying purposes that were not listed. As presented in Table XXXI, the main purpose of program evaluation was to document students' performance and report to parents or guardians, as indicated by 35 or 68.6 percent of the respondents. Determining if graduates were adequately prepared for employment yielded a response rate of 64.7

TABLE XXVIII

EMPLOYERS' ASSISTANCE IN PROGRAM EVALUATION (ITEM 19)

Respondents	Frequency	Percent
Number Indicating Employers' Assistance	31	60.8
Number Indicating No Contact with Employers	20	39.2
Total	51	100.0

TABLE XXIX*

EMPLOYERS' ASSISTANCE IN PROGRAM EVALUATION (ITEM 19)

Ways of Assisting	Frequency	Percent
Rating On-the-Job Performance	23	74.2
Suggestions for Improvement	16	51.6
Other	0	

*This table is based on 31 respondents. Respondents could have chosen one or all three ways of assistance (See item 19, Appendix A).

TABLE XXX

EVALUATION OF ADMINISTRATORS AND INSTRUCTORS

Methods*	Frequency	Percent
Self-Evaluation	33	64.7
Evaluation by Peers	18	35.3
Ratings by Students	3	5.9
Assessment by Advisory Committee	8	15.7
Tests and/or Examination Results	29	56.9
Evaluation by Ministry of Education	6	11.8
Other	0	
No Evaluation of Administrators and Instructors	7	13.7

*Respondents could have chosen one or all six methods (See question 20, Appendix A).

TABLE XXXI

OVER-ALL PURPOSE OF PROGRAM EVALUATION

Purposes	Frequency	Percent
Program Improvement	23	45.1
Assess Competency of Graduates	33	64.7
Satisfy Regulations	24	47.1
Document Performance and Report to Parents/Guardians	35	68.6
Other	0	

percent. Only 23 respondents (45.1 percent) stated that the over-all purpose of evaluation of vo-tech programs was for improvement of programs.

Professional Development

One of the objectives of the study was to determine the extent to which administrators were desirous of participating in inservice training in the area of program planning and evaluation. Items 22 through 24 were designed to gather information relative to this objective. Table XXXII shows the participants' response to item number 22. There was almost total agreement among the respondents of the need to improve the level of planning and evaluation of vo-tech programs in their schools as reflected by the 98 percent of affirmative responses to this item.

All of the respondents indicated that there was a need for a program aimed at enhancing the performance of teachers and administrators. Participants' response to item 23 is reflected in Table XXXIII.

The survey participants were asked if they believed an inservice course in planning and evaluation of vo-tech programs would be beneficial to them. One hundred percent of the respondents answered in the affirmative (See Table XXXIV).

Twenty-one respondents offered suggestions for improvement of vo-tech programs in their schools. Table XXXV illustrates the distribution of responses. The most frequently suggested idea was regular seminars and workshops for instructors and administrators. Closer

TABLE XXXII

RESPONSES TO PROFESSIONAL DEVELOPMENT ITEM CONCERNING IMPROVING PROGRAM PLANNING AND EVALUATION

Need to Improve Planning & Evaluation	Frequency	Percent
Yes	50	98.0
No	1	2.0
Total	51	100.0

TABLE XXXIII

RESPONSES TO PROFESSIONAL DEVELOPMENT ITEM CONCERNING ENHANCING PERFORMANCE

Need for Professional Development	Frequency	Percent
Yes	51	100.0
No	0	0.0
Total	51	100.0

TABLE XXXIV

RESPONSES TO PROFESSIONAL DEVELOPMENT ITEM CONCERNING INSERVICE TRAINING

Need for Inservice Training	Frequency	Percent
Yes	51	100.0
No	0	0.0
Total	51	100.0

TABLE XXXV

DISTRIBUTION OF RESPONDENTS CONCERNING SUGGESTIONS FOR IMPROVEMENT

Item Number 25 Suggestions		N
Regular seminars and workshops for instructors and administrators		11
Closer linkage between business and industry aimed at:		
* planning and development of programs according to industry's needs	[5]	
* creating work experience for students	[2]	
* utilization of industry personnel to assist in the training of students	[1]	8
Program evaluation on a continual basis including evaluation by external team		5
Internship program in industry for teachers		5
Competitive salaries must be provided to attract and retain vo-tech instructors		4
Workshops need to be better equipped		4
More material for indepth hands-on training		4
Providing scholarships to enable awardees to improve professionally and gain "exposure"		4
Development of resource center to provide:		
* assistance with instructional material		2
* information on various programs (e.g. task analysis)		1
Formation of advisory committees		2
Reduce class size		2
Time allotted to visit with industry on a regular basis to observe current trends, etcetera		2
The introduction of CBVE with carefully designed modules and appropriate teacher training to administer the program.		1

linkage between the schools and industry was also suggested as a means of improving vo-tech programs in Jamaican technical high schools.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The purpose of the study was to conduct a needs analysis for an administrators' inservice training program in the planning and evaluation of vocational-technical programs in Jamaican technical high schools.

To give direction and purpose to the study, the primary objectives were precisely stated. The objectives were to: (1) determine the status of the skills used by administrators for planning and evaluation of vocational-technical programs in Jamaican technical high schools; (2) determine the adequacy and effectiveness of planning and evaluation of programs as perceived by administrators; and (3) determine the extent to which administrators are desirous of participating in inservice training in the area of program planning and evaluation.

A 25 item questionnaire was developed to obtain the information needed to complete the study. Fifty-one of a total population of 77 (66 percent) responded to the questionnaire. An analysis revealed the following results.

Summary of the Findings

One of the objectives of the study was to determine the status of the skills used by administrators for planning and evaluation of

vo-tech programs in Jamaican technical high schools. Sixteen items on the 25 item questionnaire were designed to gather information relative to this objective. The major findings relevant to this objective are as follows:

1. Forty-nine percent of the respondents reported having a written philosophy statement.

2. Forty-two or 82.4 percent of the respondents indicated that the objectives of their institution were defined.

3. Thirty-nine or 76.4 percent of the respondents stated that the objectives of their institution were achievable in light of current philosophy.

4. Twenty respondents (39.2 percent) reported that their schools have an overall advisory committee.

5. Fourteen or 27.5 percent of the respondents indicated that there was an advisory committee for each program.

6. The membership of existing advisory committees consist mainly of vocational teachers and administrators. Only two respondents reported that employers and students are members of program advisory committees.

7. The role of the advisory committee was ranked by respondents as follows:

Questionnaire Statement	Rank
To assist in identifying skills needed by industry	1
To assist in the establishment of program standards	2
To assist in the development of course content and materials	3
To help provide financial assistance	4
To help provide equipment and supplies	5

To help provide equipment and supplies	6
To help place graduates in jobs	7

8. Twenty respondents (39.2 percent) reported that no surveys were conducted in order to determine which vo-tech programs should be offered in their school. Of the 31 (60.8 percent) respondents who reported that surveys were conducted, approximately 66 percent stated that the purpose of such surveys was to determine students' interest in programs; 58 percent stated that surveys were conducted to determine the skills needed by employers and approximately 55 percent indicated that the purpose of such surveys was to determine current and future labor demands.

9. Thirty or 58.8 percent of the respondents reported that continual review and evaluation of students' interest was being utilized as a method of determining how programs can be improved; 45.1 percent stated continual review and evaluation of current and future labor demands; and 39.2 percent indicated dialogue with employers.

10. Drawing ideas from various curricula was the method most frequently used to determine the content of programs as reflected in the response of 60.8 percent of the participants. Only 27.5 percent percent of the respondents indicated the use of occupational analysis as a method of determining program content.

11. Approximately 96 percent of the respondents reported that instructors help to determine the facilities and equipment needed for programs. Only 29.4 percent indicated that input was made by business and industry personnel while 19.6 percent reported advisory committee input.

12. Forty-nine or 96.1 percent of the respondents stated the use

of practicals as a means of assessing students' level of competency in vo-tech programs while 92.2 percent stated that paper and pencil tests were the methods used.

13. Thirty-seven respondents (72.5 percent) indicated that there is no follow-up of former students. Of the 14 (27.5 percent) respondents who reported that follow-up were conducted, ten stated they were carried out in order to determine occupational field of graduates. Only seven indicated that such studies were conducted to determine former students' perception of program strengths and weaknesses.

14. Thirty-five or 68.6 percent of the respondents stated that the over-all purpose of program evaluation was to document the performance of students and report to parents or guardians, while 64.7 percent stated that its purpose was to determine if graduates were adequately prepared for employment. Only 45.1 percent of the respondents stated that the purpose of program evaluation was to provide information for program improvement.

The second and third objectives of the study were to determine the adequacy and effectiveness of program planning and evaluation as perceived by administrators and to determine the extent to which administrators are desirious of participating in inservice training in the area of program planning and evaluation. Three questions were asked relative to these objectives.

The findings of the study concerning whether administrators saw the need to improve the level of program planning and evaluation at their schools showed that 98 percent of the respondents saw the need for such improvement.

All 51 respondents stated that there is need for a program aimed at enhancing the performance of teachers and administrators.

The final question, "Do you believe an inservice course in planning and evaluation of vo-tech programs would be beneficial to you?" also received 100 percent affirmative responses.

The most frequently suggested ideas for improvement of vo-tech programs in Jamaican technical high schools were regular seminars and workshops, and close linkages between the schools and industry.

Conclusions

A careful analysis of the data led to the following conclusions:

1. It can be concluded that the planning and evaluation of vocational-technical programs in Jamaican technical high schools is inadequate.

2. Technical high school administrators in Jamaica have insufficient understanding of the breadth and depth of the planning and evaluation functions for vo-tech programs.

3. Based on an analysis of the data, it can be concluded that administrators do not possess the skills to plan and evaluate vocational-technical programs effectively.

4. It can be concluded that the quality of vo-tech programs in Jamaica can be improved through an inservice program in the planning and evaluation of vocational-technical programs.

Recommendations

Based on the findings of this survey, the following recommendations are warranted:

1. An inservice training course should be offered to enable administrators to improve their skills in all aspects of program planning and evaluation including the setting up of advisory councils and program advisory committees.

2. The technical high school system needs to establish functional linkages with business and industry with a view to improving existing vo-tech programs and developing new programs as the need arises.

3. Industrial experience through the form of summer employment and/or internship should be designed to enable instructional personnel to update and develop new competencies. Industrial experience should form part of the requirements for the certification of technical high school instructors and administrators.

4. Staff development programs should be designed for entire school staffs to enable school personnel to development professionally. These programs should become an integral part of the technical high school system and should be offered on an ongoing basis.

5. The College of Arts Science and Technology (CAST) needs to reanalyze the content of the existing curriculum for the training of vocational-technical teachers to see if there is content that should be included. A course in planning and evaluation of vocational-technical programs should become a part of the requirements in the training of vo-tech teachers.

6. Program evaluation conducted on a continual basis should become an integral part of vo-tech education. The various program evaluation techniques highlighted in the literature should be utilized.

7. An evaluation committee should be set up to evaluate vo-tech

programs in the technical high schools. The vo-tech unit in the Ministry of Education along with school and industry personnel should develop a standardized evaluation format designed especially for the technical high schools.

8. The vo-tech unit in the Ministry of Education should be expanded to provide various services in order that the quality of vo-tech education can be improved. Such services should include the development of curriculum instructional materials including competency based materials, research, career guidance, testing, and student services.

9. A "School/University Partnership" should be developed between the technical high schools and the College of Arts Science and Technology (CAST) and the University of the West Indies (UWI) through which credit toward a baccalaureate degree and graduate credit can be offered for applicable work experience and participation in staff development inservice training.

10. A National Vocational Association needs to be formed. Membership should include all vocational instructors, administrators and support staff. The overall goal of such an association is for all members to work for improvement of programs.

Recommendations for Further Research

Based on the findings of this study, the following recommendations are suggested for consideration for additional research to aid in program planning and evaluation.

1. An evaluative follow-up survey study of recent graduates of technical high schools to determine the adequacy and effectiveness of

programs as perceived by employers.

2. An evaluative follow-up survey study of recent graduates of technical high schools to determine the adequacy and effectiveness of programs as perceived by graduates.

3. A survey of current and prospective employers to determine job opportunities and the skills, knowledge and aptitudes required.

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APPENDIXES

APPENDIX A

QUESTIONNAIRE

A. BACKGROUND INFORMATION

Please place a check mark (✓) in the appropriate box.

Title of person completing questionnaire:

1. ☐ Principal ☐ Vice Principal ☐ Head of Department

2. What is your area of specialization?

☐ Administration ☐ Computer Studies

☐ Agriculture ☐ Electricity/Electronics

☐ Woodwork ☐ Home Economics

☐ Business and Office Education ☐ Machine Shop/Welding

☐ Auto Mechanics ☐ Other (please specify) _____

3. Education Level:

☐ Teacher Training ☐ Specialist

☐ Baccalaureate Degree ☐ Graduate Degree

☐ Other (please specify) _____

4. How many years have you been employed professionally in vo-tech education in a technical high school? _____

5. Other than school related, how many years of practical experience have you had in your vo-tech field of specialization? _____

B. PROGRAM PLANNING

6. Does your school have a written philosophy? ☐ Yes ☐ No

7. Are the objectives of your institution defined? ☐ Yes ☐ No

8. If your answer to (7) is "yes", are the objectives achievable in the light of current philosophy? ☐ Yes ☐ No

9. Does your school have an overall advisory committee? ☐ Yes ☐ No

10. Is there an advisory committee for each program? ☐ Yes ☐ No

11. If your answer to (10) is "yes", please indicate the composition of program advisory committees. (Please check as many as apply).

☐ Employees in related areas

☐ Vocational teachers

☐ Curriculum planners

☐ Employers (business and industry)

☐ Successful graduates of programs

☐ Vocational director or supervisor

☐ Chairman of school board

☐ Politician

☐ Students

☐ Vocational administrators

☐ Other (please specify) _____

Please rank the following in order from 1 (most important) to 7 (least Important).

12. What do you perceive the role of an advisory committee to be?

____ To assist in identifying skills needed by industry

____ To assist in the establishment of program standards

____ To assist in the development of course content and materials

____ To help place graduates in jobs

____ To help provide financial assistance to the school

____ To help provide equipment and supplies

____ To assist with program evaluation

(In items 13 through 21, please check as many as apply)

13. In order to decide which vo-tech programs should be offered in your school, surveys were conducted to determine:

- ☐ Skills needed by employers
- ☐ Students' interest in program
- ☐ Current and future labor demand
- ☐ Other (please specify) _____
- ☐ No surveys were conducted

14. In order to determine how programs can be improved there is continual:

- ☐ Review and evaluation of students' interest
- ☐ Dialogue with employers to determine if their needs change
- ☐ Review and evaluation of current and future labor demands
- ☐ None of the above

15. The content of programs is determined by:

- ☐ Analysis of duties and tasks performed by workers
- ☐ Observation of what is being done in other schools
- ☐ Ideas drawn from various curricula
- ☐ Use of information given by experts in the field
- ☐ Other (please specify) _____

16. In order to determine the facilities and equipment needed for each program input is made by:

- ☐ Instructor
- ☐ Personnel from business and industry
- ☐ Experts in the field
- ☐ Advisory committee members
- ☐ Other (please specify) _____

C. PROGRAM EVALUATION

17. What method(s) is/are used to assess students' level of competency in vo-tech programs?

- ☐ Paper and pencil achievement tests
- ☐ Practicals
- ☐ Other (please specify) _____

18. There is a follow-up (tracer studies) of former students conducted by your school to determine:

- ☐ Occupational field of graduates
- ☐ Occupational field of dropouts
- ☐ Former students' perceptions of program strengths and weaknesses
- ☐ There is no follow-up

If your school conducts follow-up (tracer studies) of former students, when was the last follow-up done? _____

19. Employers assist with evaluation of vo-tech programs by:

- ☐ Rating former students' performance on the job
- ☐ Making suggestions for improving programs
- ☐ Other (please specify) _____
- ☐ There is no contact with employers regarding former students' performance.

20. The method(s) used to assess administrators' and instructors' strengths and weaknesses in helping students to meet program objectives is/are:

- ☐ Self-evaluation

20. ☐ Evaluation by peers

☐ Ratings by students

☐ Assessment by advisory committee

☐ Tests and/or examination results

☐ Evaluation by committee appointed by the Ministry of Education.

☐ Other (please specify) _____

☐ There is no evaluation of administrators and instructors.

21. The over-all purpose of evaluation of vo-tech programs at my institution is to:

☐ Provide information for program improvement (if improvement is indicated)

☐ Determine if graduates are adequately prepared for employment.

☐ To satisfy regulations set down by the Ministry of Education

☐ Document students' performance and report to parents/guardians

☐ Other (please specify) _____

D. PROFESSIONAL AND STAFF DEVELOPMENT

22. As an administrator of vo-tech programs, do you see the need to improve the level of planning and evaluation of vo-tech programs at your school? ☐ Yes ☐ No

23. Do you see the need for a program aimed at enhancing the performance of teachers and administrators? ☐ Yes ☐ No

24. Do you believe an inservice course in Planning and Evaluation of vo-tech programs would be beneficial to you? ☐ Yes ☐ No

25. Please feel free to make any comments and/or suggestions which could be helpful for the improvement of vo-tech programs in technical high schools in Jamaica. (If more space is needed, please use the back of the questionnaire).

Thank you for completing this questionnaire.

APPENDIX B

QUESTIONNAIRE EVALUATION FORM

Questionnaire Evaluation

The questionnaire you are about to complete is part of my Master's thesis research. I am trying to determine the status of the skills possessed by administrators of technical high schools in Jamaica for the planning of evaluation of vocational-technical (vo tech) programs. Your evaluation of the questionnaire will be very helpful.

Please assist me in determining the suitability of the questionnaire by noting the length of time it takes you to complete it. ____ (minutes). After completing the questionnaire, please rank your opinion of the items according to the following scale:

1 = unfavorable
2 = poor
3 = average
4 = above average
5 = very favorable

(Circle the number that represents your opinion)

1.	Clarity of statements	1	2	3	4	5
2.	Style of questionnaire	1	2	3	4	5
3.	Length of questionnaire	1	2	3	4	5
4.	Overall impression of questionnaire	1	2	3	4	5
5.	The degree to which the questionnaire determines the status of the skills possessed by administrators of technical high schools for the planning and evaluation of vo-tech programs.	1	2	3	4	5

Please offer any suggestions you may have for improving this questionnaire. _____

_____

_____

_____

_____

APPENDIX C

COVER LETTER

June 29, 1987

Dear Teacher:

I am a Jamaican student undergoing a course of study at Oklahoma State University. As part of the course requirement I am gathering information about the planning and evaluation of vocational-technical programs in Jamaica. I am particularly interested in the thoughts of principals, vice principals and heads of vocational-technical departments as they relate to some specific areas of planning and evaluation.

Please assist me in this effort by completing the questionnaire. You are asked to respond to the items frankly and honestly. Anonymity is guaranteed as no identifying label is required on the questionnnaire.

If you would like to know the findings of this research, please make your request to: Mrs. Elsie Webber, Assistant Chief Education Officer, Tech-Voc Unit, Ministry of Education, Jamaica, who has kindly consented to supervise the distribution and collection of the questionnaires.

I would greatly appreciate your completing the questionnaire and returning it to Mrs. Webber by July 17, 1987. Looking forward to your cooperation.

Sincerely,

Loveda Jones
Graduate Student
Oklahoma State University

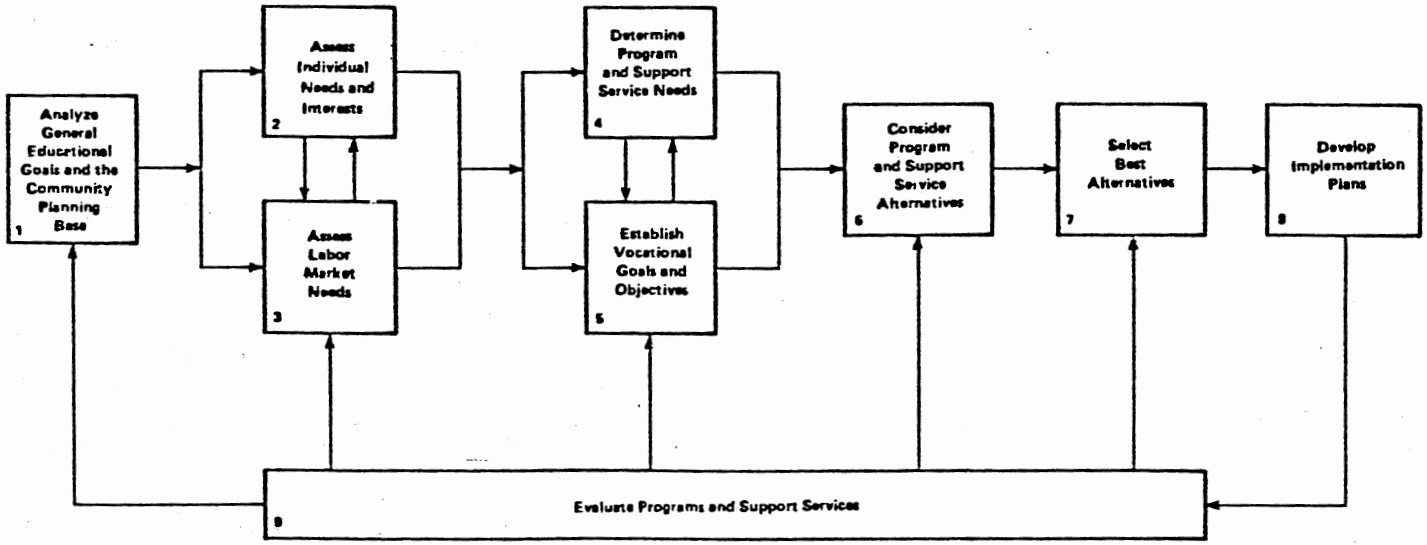
LJ/wr

P.S. This questionnaire is to be completed by <u>principals</u>, <u>vice principals</u> and <u>heads of vocational-technical departments</u> (i.e. supervisors/coordinators of "skill" areas).

APPENDIX D

VOCATIONAL EDUCATION PROGRAM PLANNING MODEL

VOCATIONAL EDUCATION PROGRAM PLANNING MODEL



Source: Develop Local Plans for Vocational Education: Part I. Module LT-A-1, Athens, GA: American Association for Vocational Center for Research in Vocational Instructional Materials and the National Center for Research in Vocational Education, Ohio State University, 1985, p. 16.

APPENDIX E

KEY FACTORS IN DECISION MAKING

KEY FACTORS IN DECISION MAKING

MAJOR FACTORS	OPERATIONAL DEFINITION (Factors Cited by Simulation Participants)
SATISFACTION	Individual needs of people: preferred occupations of students, special needs of individuals, student interest, cost to students, ability to serve students, etc.
SATISFACTORINESS	Needs of society: occupational demand, placement rate, employer acceptance, economic growth, occupational turnover rate, business and labor interest, etc.
EFFICIENCY	Educational and/or program cost: staff and facilities availability, duplication of effort, cost is prohibitive, entry-level program, cost-effectiveness, cost per student, etc.
ALTERNATIVE SOURCES	Other educational sources: other agencies better tooled to provide training, apprenticeship approach, secondary education is sufficient, etc.
QUALITY	Educational and/or program quality: program prerequisites and organization, local support services, on-the-job training opportunities, program comprehensiveness, etc.
EQUAL OPPORTUNITY	Equal opportunity for education: vocational education should be made available to all who can benefit, career education for minorities, cultural goals of minorities are different, etc.
LEGAL	Legal requirements: college degree program, vocational education act, professional occupation, skilled worker, limited training required, etc.
MUTUAL SATISFACTION	Combined needs of society and individuals: programs could provide useful training, needs of local area, documentation for need of programs, needs of nation, upgrading of existing occupations, etc.

SOURCE: George H. Copa et al., Factors, Priorities, and Information Needs in Planning Vocational Education: Views of Selected Educational Planners in Minnesota (Minneapolis, MN: University of Minnesota, Department of Vocational and Technical Education, 1976), p. 23.

VITA

Loveda Urcelyn Jones

Candidate for the Degree of

Master of Science

Thesis: A NEEDS ANALYSIS FOR INSERVICE TRAINING OF ADMINISTRATORS IN PLANNING AND EVALUATION OF VOCATIONAL-TECHNICAL PROGRAMS IN JAMAICAN TECHNICAL HIGH SCHOOLS

Major Field: Occupational and Adult Education

Biographical:

Personal Data: Born in St. Thomas, Jamaica, the daughter of the late Gladys McLean-Spencer and Arthur Levy. Married to Grenville Roy Jones.

Education: Graduated from Buxton High School, Kingston, Jamaica, in December 1963; received a Trained Teacher Certificate from the Shortwood Teachers' College, Jamaica, in July 1967; received Bachelor of Arts degree in English from the University of Miami, Miami, Florida, in February, 1973; completed requirements for the Master of Science degree in Occupational and Adult Education at Oklahoma State University in December, 1987.

Professional Experience: Primary School Teacher, Harbour View Primary School, Kingston, Jamaica, September, 1967 to August, 1969; Teacher of English, St. Andrew Technical High School, Kingston, Jamaica, September, 1973 to August, 1977; Ardenne High School, Kingston, Jamaica, September, 1977 to August, 1979. While at Ardenne High School promoted to Senior Teacher 1 with responsibility for the Prefect System, Detention System and Grade 11 Supervisor; Head of Department of English, Dunoon Technical High School, Kingston, Jamaica, September, 1979 to December, 1984; Assistant Principal, Dunoon Technical High School, January, 1985 to December, 1986; Assistant Examiner, Caribbean Examination Council (CXC) English A: 1979 to 1983, English B, 1984 to 1986.

Professional Organizations: Jamaica Teachers' Association, National Association of Teachers of English, Jamaica (NATE), American Vocational Association, Association of Supervision and Curriculum Development.